Instructions for Collecting Information with Global Positioning Systems for the California Natural Diversity Database

Data collected with Global Positioning Systems (GPS) are welcomed, but, cannot be used in our Geographic Information System (GIS) database unless the **datum**, and **coordinate system** are reported on the Field Survey form.

Definitions

Datum - defines the origin and orientation of the latitude and longitude lines. Common examples for North America are: NAD27, NAD83 and WGS 84

Coordinate system - measurements that describe a position on the surface of the earth. Some examples are:

Universal Transverse Mercator (UTM) Zone, Easting and Northing.

- UTM Zone 10; 644886E, 4301511N

Geographic - also referred to as Latitude and Longitude

- Degrees, Minutes, Seconds (DDD° MM' SS.S")
  Latitude: 32° 18' 23.1" N
  Longitude: 122° 36' 52.5" W
- Decimal Degrees (DDD.DDDDD°)
  Latitude: 32.30642
  Longitude: -122.61458

CNDDB Preferred Settings

- UTM (Universal Transverse Mercator projection)
- NAD27 (North American Datum 1927)

Recording GPS Information on the CNDDB Field Survey Form (http://www.dfg.ca.gov/whdab/natspec.pdf)

Horizontal Accuracy: This will be displayed on your GPS unit and is dependant on the number of satellite signals your unit is detecting.

- Example: 15 meters

GPS Make and Model

- Example: Garmin 12XL

Things to remember

- Record the datum and coordinates on the Field Observation Form.
- The datum for the CNDDB dataset is NAD27 due to the fact that CNDDB data are displayed over USGS quad maps in which the datum is NAD27.
- Try to obtain a GPS reading from satellites with as evenly distributed placement as possible (see your user manual).
- Acquire 3-Dimensional GPS location, if possible (4+ satellites).
- Receiving four signals in a canyon or under tree canopy may be difficult.
- Record location even if you are unable to acquire four (4) satellites.

References

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